EXHIBIT A

Response of Wireless Strategies Inc. to the Fixed Wireless Communications Coalition's Filing of December 30, 2011.

Introduction

- The consequence of not updating Rule 101.115(f) is to force operators of non-compliant antennas to use larger than necessary antennas, the opposite of the goal of the Commission, which is to find ways to minimize antenna size without *"... adversely affecting other users in the specific bands by increasing the risk of interference."*[1]

- As the FWCC has no viable technical argument to oppose the proposed updating of Rule 101.115(f), they have resorted to making outlandish false statements regarding WSI's suggestions and positions, and have blatantly ignored Rule 101.103 and the proposed minor changes to Rule 101.115(f) when offering their arguments.

False Statements and Conceptual Errors by the FWCC

Page 2, Paragraph 1

"The FWCC opposes the suggestion of Wireless Strategies, Inc. (WSI) to relax the Commission's antenna standards in Fixed Service"

WSI is against any changes to the rules regarding Category A antennas and has never made any statements to the contrary. WSI is simply applying the proposed Rule 101.115(f) to all non-compliant antennas in the specified bands. That is, only in the 6GHz and 11GHz bands specified in 101.115(f). The FWCC does not seem to understand that it is Rule 101.115(f) and Rule 101.103 that prohibit interference from a non-compliant antenna, not the non-compliant antenna pattern. By complying with Rule 101.103 and the updated Rule 101.115, non-compliant antennas, regardless of pattern, can be safely deployed and will not cause harmful interference nor block new applicants.

[1] FCC Docket 10-153, Section V FNPRM, paragraph 77.

False Statements by the FWCC

Page 2, Paragraph 2

"WSI asks the Commission to abolish the Category B antenna standard and, for most purposes the Category A standard as well."

This is not only untrue but absurd; WSI has never asked the Commission to abolish the Category A standard. Moreover, the FWCC has lost sight of the goal, which is to prevent harmful interference, not to generate an arbitrary specification for Category B antennas. It is Rule 101.115(f) that prohibits interference from non-compliant antennas, not an arbitrary Category B specification.

To Require Larger than Necessary Antennas is Not Good Engineering Practice

Page 2, Paragraph 3

"The present rules…require Fixed Service antennas to meet at least Category B standard…and to upgrade to Category A if use of [the non-standard]*…antenna causes interference to another licensee or applicant. These rules reflect good engineering practice."*

It is clearly not good engineering practice to require the use of larger (Category A) antennas if the interference can be eliminated by substituting an antenna meeting a higher (non-compliant) performance standard or by lowering the transmitter power. For example, it is better engineering practice to give an operator using a non-compliant inexpensive two foot antenna the opportunity to upgrade to a more costly high-performance two foot antenna rather than be forced to install a four foot Category A antenna, with its much higher cost and monthly charges, and which might force the operator off the air if the antenna support structure cannot support the wind loading of a four foot antenna, etc.

The FWCC Ignores Rules 101.103 and updated Rule 101.115(f) and the Benefits of Comprehensive Interference Mitigation Options

Page 2; Paragraph 4 through Page 4 Paragraph 3

In Page 2, paragraph 4 the FWCC states,

"Why require better (and more expensive) antennas than is strictly necessary? But a closer look at the proposal shows it will severely impair spectrum efficiency for all users."

No, a closer look which includes consideration of Rule 101.103 and the updated Rule 101.115(f) shows it will not impair spectrum efficiency.

Then, in paragraph 5 and in page 3, Figures 1, 2 and 3 and paragraphs 2 and 3, the FWCC attempts to support their case for larger than necessary antennas by blatantly ignoring existing Rule 101.103 and the proposed Rule 101.115(f) to try to show that smaller antennas and smaller antennas with high power will "sterilize" a much greater area against others than a Category A antenna and *"... make a large geographic area unavailable to others, on that frequency."*

This statement is nonsense as Rule 101.103 prevents any new applicant (compliant or non-compliant) from causing harmful interference to existing licensees. It is also a disadvantage for a new applicant to produce a higher than necessary EIRP, as the higher the EIRP the harder it is to prior coordinate.

This fact is stated very well by EIBASS in their filing on November 22, 2011[2]:

"EIBASS agrees that the use of a non-compliant transmitting antenna will not cause interference. This is also the case for a new path with a compliant transmitting antenna. This is because any new path must demonstrate protection of existing paths; it is just such a showing is more difficult with a non-compliant transmitting antenna."

In addition, Rule 101.115(f) (with minor changes proposed by WSI) prevents <u>any</u> non-compliant operator from causing harmful interference.

Only by ignoring Rules 101.103 and the proposed Rule 101.115(f) can the FWCC contend that smaller antennas will 'sterilize'[3] areas against use by compliant new applicants; that every smaller antenna will make a large geographic area unavailable to other applicants[4]; that non-compliant operators will be able to block new/later entrants[5]; and that the deployment of many small antennas over a geographic area would raise the noise floor, require additional margin in the interference calculation algorithms, and further limit the number of licensees who can operate in the area[6]. The reality is that the FWCC <u>cannot</u> ignore Rules 101.103 and 101.115(f).

On page 3, paragraphs 3 and 5 the FWCC states some of the benefits of smaller antennas -- *"Not only does a smaller antenna cost less at the outset, but it incurs lower costs in tower lease charges"* – and then, in paragraph 5 and on page 4, paragraph 2, inadvertently shows the great disadvantage of their position of opposing a comprehensive approach to mitigating the potential of harmful interference:

"At the very least the small-antenna incumbent will [be forced to incur] *substantial expense, not only in acquiring and installing a* [much] *larger* [Category A] *antenna, but also in paying higher ongoing costs for tower space. The situation may be worse, however. In some cases, the tower holding the small antenna will not be able to accommodate an antenna large enough to protect the new comer from interference* [the FWCC fails to state that this problem would not occur with a high performance small antenna]. *The incumbent would then* [unnecessarily] *have to engineer*

[2] EIBASS ex Parte filing of November 22, 2011, page 3, paragraph 8.
[3] FWCC ex parte filing, December 30, 2011, page 3, para. 2.
[4] FWCC ex parte filing, December 30, 2011, page 3, para. 3.
[5] FWCC ex parte filing, December 30, 2011, page 4, para. 4.
[6] FWCC ex parte filing, December 30, 2011, page 4, para. 5.

and construct an entirely new link using a different tower. Worst still, depending on the geography and tower availability, it may take two or more links to replace the single link that relied on the small antenna [and could still be in use with a high performance small antenna]*."*

"No incumbent will be eager to undertake these [unnecessary] *costs and disruptions…We speak from experience: although the present rules require an incumbent to upgrade from Category B antennas to Category A, where necessary to accommodate an applicant, the Category B users have been chronically slow to comply."*

WSI contends that if the small percentage of non-compliant operators that are required to mitigate potential interference had the option of lowering the transmitter power and/or upgrading to a small higher performance non-compliant antenna, instead of being unnecessarily forced to migrate to a large Category A antenna, the operator would not be motivated to delay complying with the rules. We also note that the FWCC has already proposed [7]mitigating such a problem by proposing that the rules set a time period within which an incumbent must show how the potential for harmful interference was eliminated. WSI agrees with setting a time limit.

Inaccurate Statements by the FWCC

Page 4, Paragraph 4

"The WSI proposal would upset that co-equal balance by letting the user of an inferior (non-compliant) antenna effectively block later entrants."

Just the opposite, WSI's proposed minor changes of Rule 101.115(f) prohibits users of non-compliant antennas from blocking later entrants. The FWCC argument presumes that the Commission would condone non-compliance with its rules.

Page 4, Paragraph 5

"Finally, the deployment of many small antennas over a geographic area would raise the noise floor, and require additional margin in the interference calculation algorithms due to massive multiple exposure. This form of spectrum pollution would impede frequency coordination and further limit the number of licensees who can operate in the area."

This is not true because:

(a) Only stations with Category A antennas are permitted to contribute to the noise floor.

(b) All authorized stations in an area (compliant, or non-compliant that could be upgraded to compliant) must be included in a prior coordination study.

(c) Rules 101.103 and 101.115(f) ensure that the interference arriving at an existing compliant station or a compliant new applicant from a non-compliant station never causes harmful interference and therefore never limits the number of compliant operators in the area.

[7]FWCC ex parte filing, December 30, 2011, page 4, Reference 6.

Page 4, Paragraph 6

"The current rules requiring Category B antennas at a minimum and Category A when needed to accommodate other users, give frequency coordinators a basis for planning."

The fact is that when doing a prior coordination analysis spectrum managers use the actual antenna pattern that will be authorized, not the minimum Category A or Category B antenna pattern, specified in Rule 101.115.

WSI's proposal does not change present prior coordination procedures and therefore the FWCC's statement that "*WSI's proposal would eliminate these certainties, and greatly hamper coordinators in looking ahead to maximize use of the spectrum, both now and in the future"* is completely without merit.

Inaccurate Statement and Wrong Conclusion

Page 5, Last Paragraph

"In short, for all the reasons given above, WSI's proposal would result in far less efficient use of the spectrum. The Commission should reject it"

The FWCC filing has been shown to be full of inaccurate, conflicting and outright false statements and conclusions. The wasteful and costly consequences of the FWCC's position is that operators would be forced to use larger than necessary antennas instead of being allowed to safely optimize the size of smaller antennas so as to take advantage of all the benefits and not create harmful interference. The proposed minor changes to Rule 101.115(f) would in fact make much more effective use of the spectrum. The Commission should therefore approve the proposed minor changes to Rule 101.115(f), making it economically viable for Fixed Service operators to bring broadband to un-served and underserved communities.